TIKHOV, G.A.; PEKELIS, V., red.; TERUSHIN, M., tekhn. red.

[Astrobiology] Astrobiologiia. Moskva, Izd-vo Tsk VLKSM

"Molodaia gvardiia," 1953. 65 p. (MIRA 14:12)

1. Chlen-korrespondent AN SSSR (for Tikhonov)

(Life on other planets)

GUMILEYSKIY, Lev: PEKELIS, V., redaktor; MIKHAYLOVSKAYA, N., tekhnicheskiy redaktor where the state of the st

PEKELIS, V.

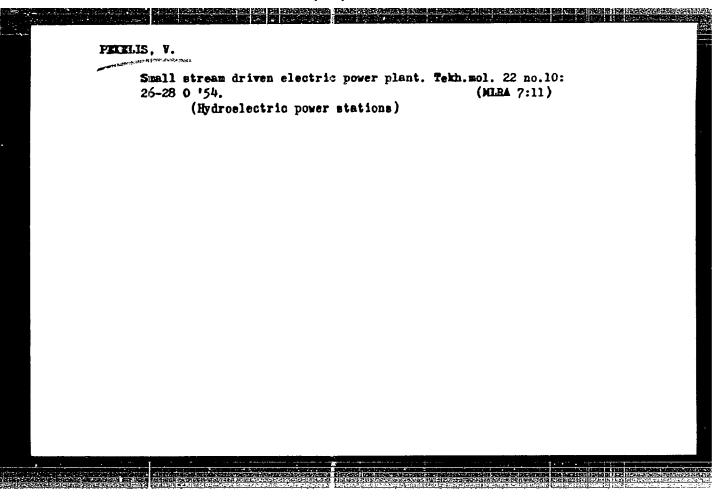
RAPKOV, V., PEKKLIS, V.; YAKHOHTOVA, Z., redaktor; ZIKEYEV, N., khudo-shestvennyy Yedaktor; SOHENZOB, A., tekhnicheskly redaktor.

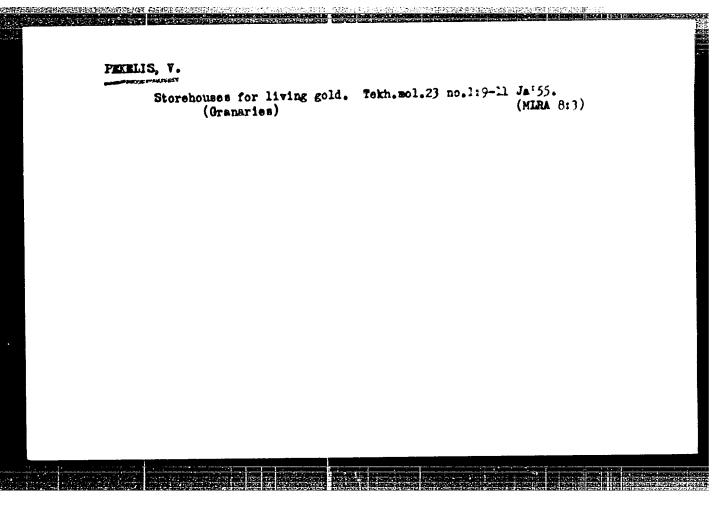
[The young motion-picture operator] Hunyi kinomekhanik, [Moskva] Izd-vo Tek VIKEM "Molodaia gvardiia," 1954, 110 p. (MIRA 8:1) (Motion-picture projection)

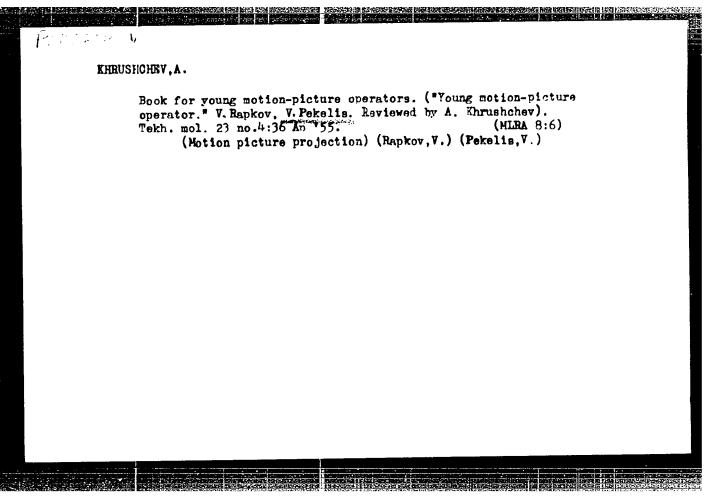
LYAPUNOV, Boris Valerianovich; PECELIS, Vt., redaktor; BODROV, A., tekhnicheskiy redaktor

[Discovery of a world] Otkrytie mira [Moskva] Izd-vo TsK VIKSM
"Molodaia gvardiia," 1954. 157 p. (MIRA 8:7)

(Interplanetary voyages)



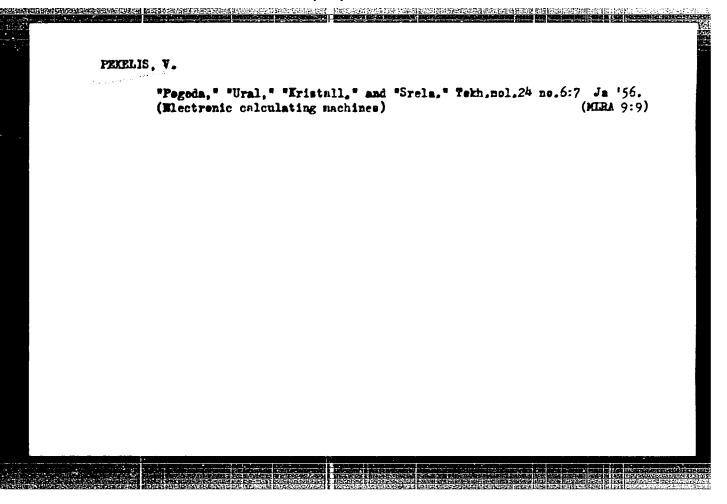




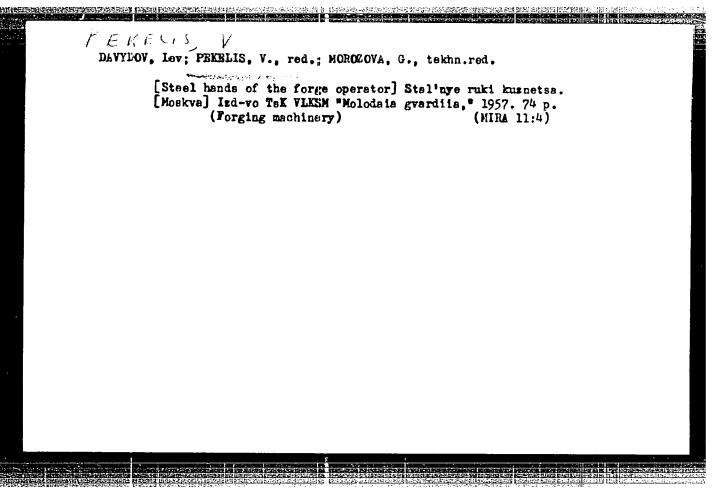
LYAPUNOV, Boris Valerianovich; PEKELIS, V., redaktor; KIRILLINA, L., tekhnicheskiy redaktor

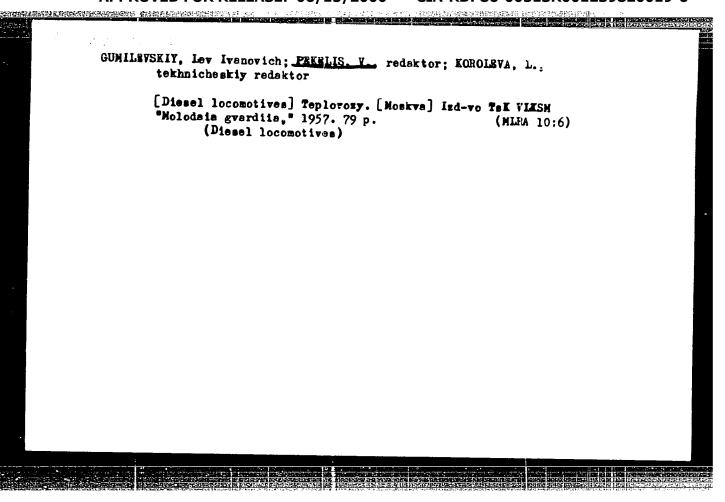
[The struggle for speed] Bor'ba za skorost'. Perer. izd. [Moskva]
Izd-vo Tsk VIKSM "Molodaia gvardiia," 1956. 207 p. (MIRA 9:10)

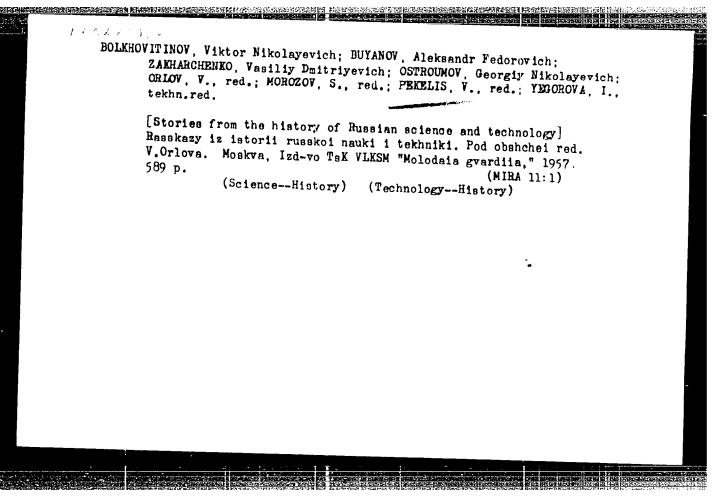
(Speed) (Engineering)

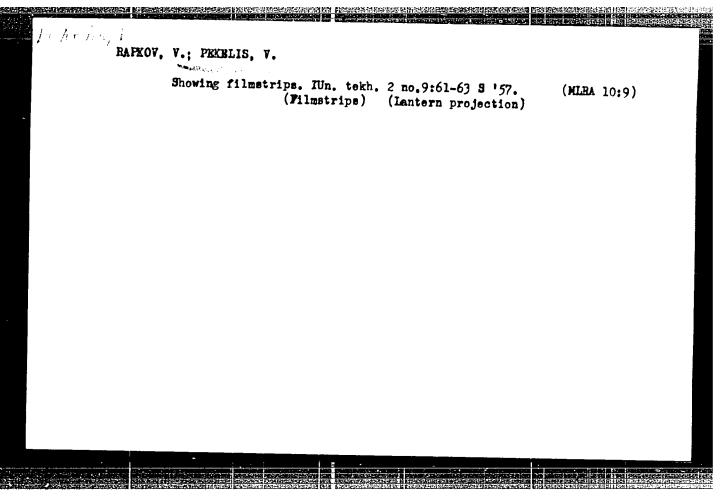


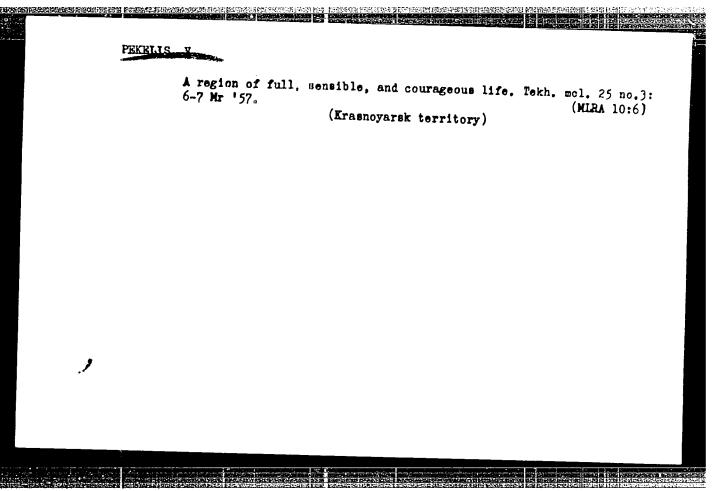
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PEKELIS,	V.					
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PEKELIS, V.

AUTHORS:

Petrov, V., Candidate of Technical Sciences, 50V/29-58-7-18/23 Konysheva, T., Engineer

TITLE:

In the World of Books and Periodicals (V mire knig i zhurnalov)

PERIODICAL:

Tekhnika molodezhi, 1958, Nr 7. pp. 30-31 (USSR)

ABSTRACT:

V. Petrov tells about a new publication which appeared on the book market: "The Young Motion Picture Engineer" by V. Rapkov and V. Pekelis, which was published by "Mclodays Granding." The author describes this book as a good manual ror the purpose of making omeself acquainted with the elements 12 1958. of motion picture engineering. The book has 8 chapters and it describes the correct manner of demonstrating 16 mm sound- and silent films. The book may be recommended not only to students but also to teachers and managers of motion-picture circles. On the whole, the authors have acquitted themselves of their task with good success. The principal chapters of the book which are devoted to the description of projection apparatus, the carrying out of seances, and the care of apparatus are written in good style. The chapter dealing with the "day-cinema" contains several mistakes and inaccurate passages, which cannot be allowed to pass

Card 1/3

In the World of Books and Periodicals

3. 1/ 29-58-7-18/23

without criticism. The book is interesting and easily comprehensible. Illustrations (drawings) are good. As motion picture apparatus are being used in an ever-increasing degree in schools, it may be assumed that a new edition of this book will soon be published, in which existing faults should be considered and eliminated.

T.Konysheva mentions the booklet on the "Preservation of Fruit, Berries, and Vegetables in Private Houses by Pasteurization" by A.K. and G.I.Yermolayev, which was announced in the periodical "Tekhnika molodezhi", 1958, Nr 5. The bocklet was published by the Zhitomir regional publishing house. Readers are told how preserves are prepared at home, and what apparatus and what tare are necessary for this purpose. The entire process is described in detail. Zhitomir glass factories began with the mass production of preserve-glasses. The preservation of fresh regetables and fruit, which has been a hobby of the enthusiasts A.K. and G.I.Yermolayev for the past ten years, is no longer a purely domestic matter but has acquired public importance. News published in various reviews and periodicals:

Card 2/3

"Vestnik Akademii nauk SSSR", 1958, Nr 1 published an article on

In the World of Books and Periodicals

"Solid Gasoline". In "Zhelemedorezhnyy transport". 1958. No. 2

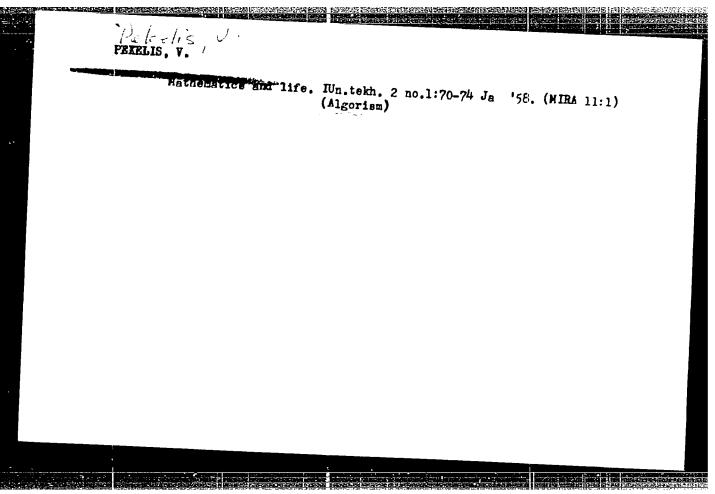
In "Zhurnal tekhnicheskoy fleikt", 1958. Vol. 28 a methol of och applicable in industrial plants in described. There is

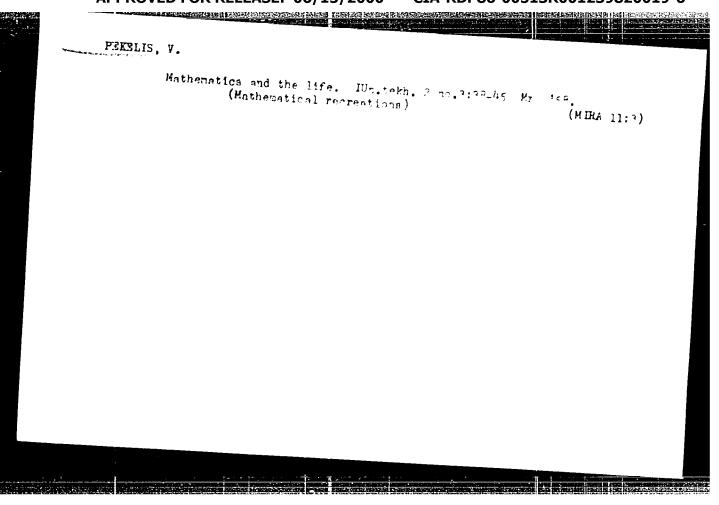
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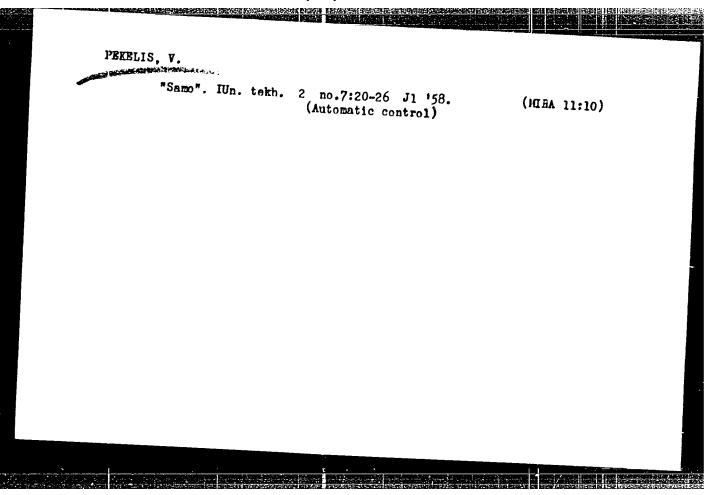
1. Motion picture phot graphy--USCR 2. Funds--Frederick 3. Fuels--USSR 4. Railreads--Control systems (. Telescope)

--Sublimation

Card 3/3







PEKELIS

AUTHORS:

Kobrinskiy, !., Professor, Pekelis, V.

29-3-7/25

TITLE:

A Dispassionate Partner (Besstrastnyy partner)

PERIODICAL:

Tekhnika Molodezhi, 1958, V. 26, Nr 3, pp. lo-12 (USSR).

ABSTRACT:

The first chess-playing automaton was built by the Hungarian mechanic Farkash Kempelen in 1769 and made a triumphant sweep all round the world. It burnt, however, in a fire in Philadel= phia and the whole humbug was exposed. The Spanish engineer Torres Kevedo built a real automaton in 1890. Yet this automaton won only with a specific opening of the game. Recently, the chessamateurs were excited by a sensational news. A new machine was sitting at the chess-board, viz. the electronic calculating-machine. It is known, in the age of progress - that the brains of a man are the backbone of any machine, no matter how clever it is. With every game, even the most simple one, opposing interests meet and the ad= versary tries to exploit to his own advantage the mistakes and errors

Mathematic tried to disclose the secret of the complicated compe=

Card 1/3

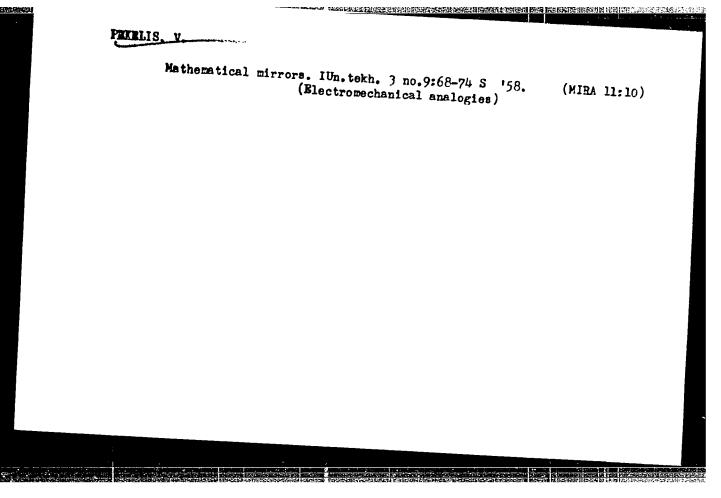
tition between reasonable beings and to determine its rules. The mathematicians Neyman, Wold, and others succeeded approximately 30

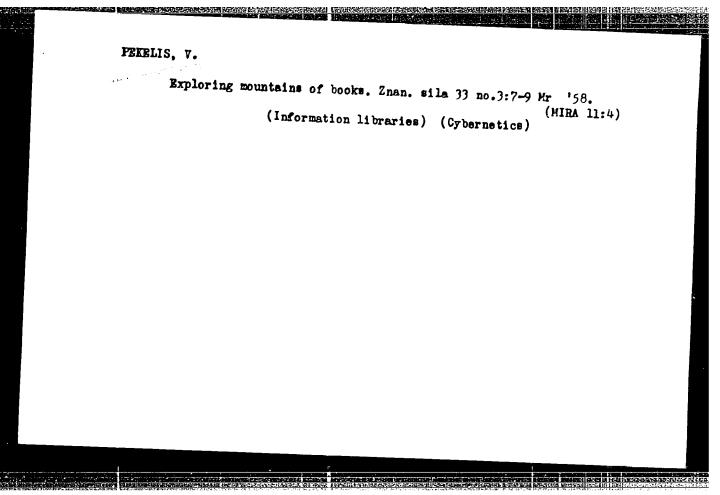
A Dispassionate Partner

29-3-7/25

years ago in establishing the bases of the mathematical theory of playing. This is of great fundamental importance and of prac= tical application in economics, strategy and other fields. In the theory of playing it is proved that the issue of a game of chess depends on both the opening and the selected strategy. Our attach= ment to chess, however, is based on the very fact that we do not know the mathematical solution of this game. The Belgian mathema= tician M. Kraychik tried to calculate, at least approximately, the possible number of variations. This number amounts to 2.10116. The chess-amateurs must not get excited: if the whole population of the world would continuously play chess and make a move each second, not less than loloo centuries would be necessary for play= ing the whole lot of variations. The game of the automaton is based on a regulating system permitting to make in every situation the better or the correct move. But there are also games the issue of which depends merely on a chance, e. g. roulette and lotto. In this case both men and machine must reply at random. Concluding, we want to mention a game in which the machine - what is amazing proved to be the stronger adversary. This game is based upon a random misleading of the partner in which case the chances to win are fifty-fifty. The machine, however, discovered unconscious rules governing the questioning by men, and won. What is the purpose of

Card 2/3





VIMHICHERKO, Ivan Pedorovich; PEKELIS, V., red.; YEVDOKIMOV, M., tekhn.red.

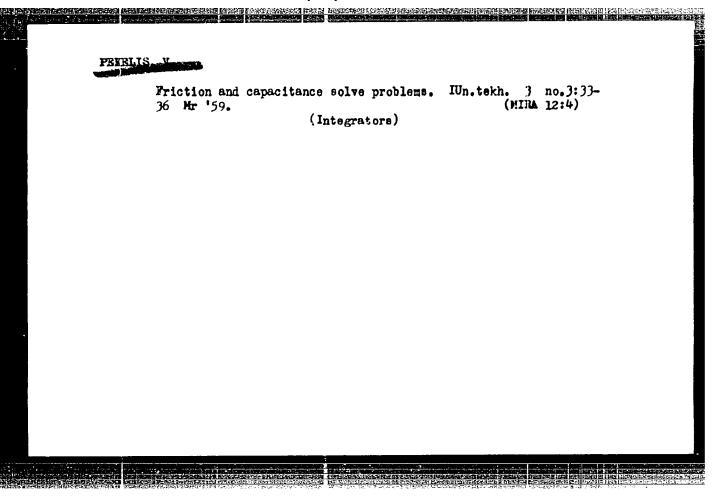
[Reflections about communism; from a writer's notebook]

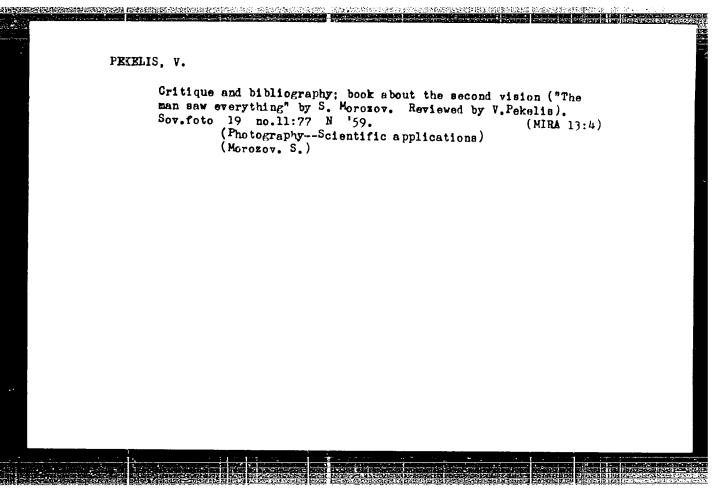
Duma o kommunisme; iz bloknota pisstella. Mockva, Izd-vo

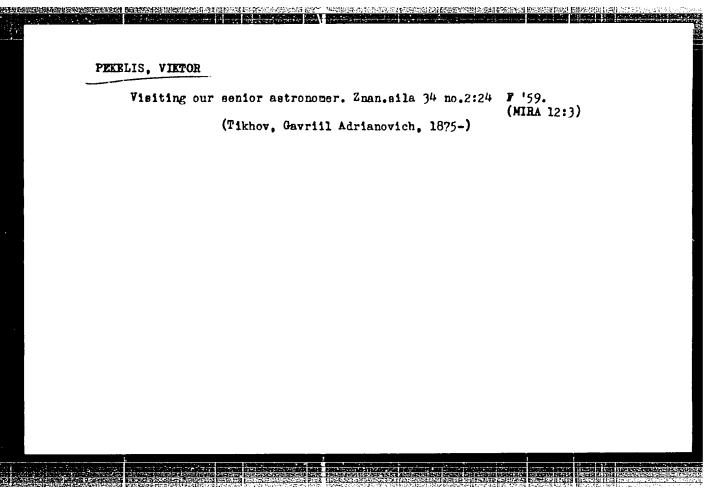
Tak VLKSM "Molodoia gvardiia," 1959. 174 p. (MIRA 13:1)

(Agriculture)

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or The Day of the Charles		LL PERS.	Ship Linen Linen Kork	Himbers, Te. [Ingineer]. Control Surfaces of Space Ships	Engineer)	[Engineer]. Trans	II. FLYDO MID THE	Y. [Professor]. The	Teuhnical Sciences].	(Madmit of an).	The booklet contains 1% articles deals and recent efforts and accomplishments it as a factor of the artistic. Though popular in style, the art of by leading Soriet extensists in the fibitions of E. E. Teichorsicht oe pace teily presented. Satallites, epace rook apace eraft, and certain partisent engles are disquared. No personalities are erances are given.	<pre>PURPOSE: This popular science booklet is intended for general reader.</pre>	\$4.: V. Kuhushkin; Tech. E4.: L. Howikows.	ennsy (Untrodden Paths of vo "Pravda," 1959. 63 p. msomol'skoy pravdy," no.	PHASE I BOOK EXPLOITATION SOY,	
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KOZLOV, Petr Mikhaylovich; PEKELIS, V., red.; KURLYKOVA, L., tekhn.red.

[Invasion of a myth] Vtorzhenie mifa. Moskva, Izd-vo Tak
VLKSM, "Molodata gvardita," 1960. 76 p. (MIRA 13:6)

(Chemical engineering)

KAPUSTIN, Ivan Il'ich; PEKKLIS, V., red.; SHLENSKAYA, M., tekhn.red.

[Production lines in the shoe industry] Konveier ekorokhodov.

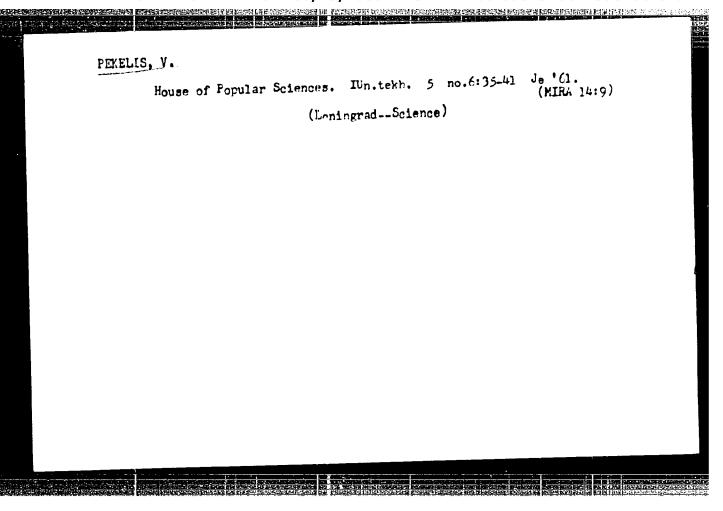
Moskva, Izd-vo Tsk Viksm "Molodeia gvardiia," 1960. 79 p.

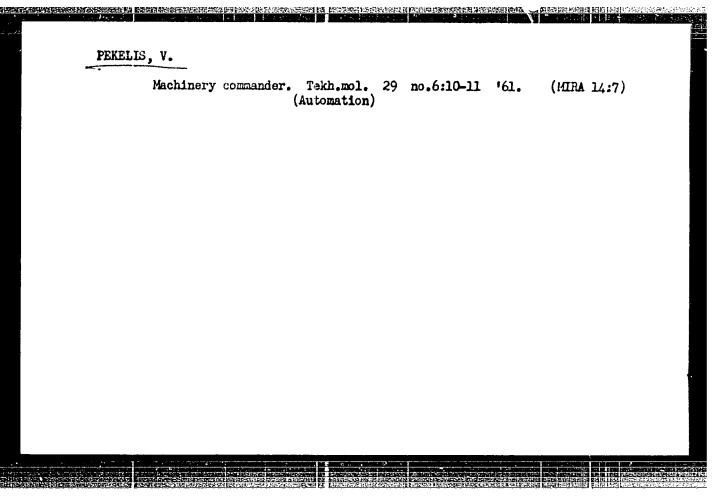
(MIRA 14:4)

(Shoe mamifacture)

VASIL'YEV, Mikhail Vasil'yevich; STANYUKOVICH, Kirill Petrovich; PEKELIS, V., red.; FEDCHENKO, V., red.; KUVYRKOVA, L., tehn. red.

[In the world of the seven elements] V mire semi stikhii. Moskve, Izdvo TsK VLKSM "Molodaia gvardiia," 1961. 254 p. (MIRA 14:7) (Physics—Juvenile literature)





MOTKOVICH, Viktor; KUL'RAGENYY, I.G., doktor tekhnicheskikh mauk, nauchnyy redaktor; PEKELIS, V.D., redaktor; OSTRIBOV, N.S., tekhnicheskty redaktor

[Foundry men of Kolomna] Kolomenskie liteishchiki. Moskva, Vses. uchebno-pedagog, izd-vo Trudrezervizdat, 1956. 46 p. (MIRA 9:12)

(Kolomna—Founding)

PEKELIS, V.D.; BERG, A., akademik, red.; KOL'MAN, E., akademik, red.; RYCHKOVA, N.G., red. izd-va; PRUSAKOVA, T.A., tekhn. red.

[The possible and impossible in cybernetics] Vozmozhnoe i nevozmozhnoe v kibernetike; sbornik statei. Moskva, Izd-vo AN SSSR, 1963. 221 p.



SHAL'IA, Miron 'Vanovich; PEKELIS, V.D., red.; TISTROVA, O.Ye., red.; VORDHIN, K.P., tekhn.red.

[Hememade hydroelectric pewer station] Samodel'naia gidreolektrestantsiia. Pod obshchei red. V.D.Pekelisa. Meskva, Ges.energ. izd-vo, 1958. 39 p. (MIRA. 11:12)

(Hydreelectric pewer stations)

RAPKOV, Vladimir Ippolitovich; PEKKLIS, Virtar Davydovich; SHAEHERINA, F., red.; KOVALEV, A., tekhn.red.

[The young motion-picture projectionist] IUnyi kinomekhenik.
IId.2., perer. i dop. Izd-vo Tak Viksm "Molodaia gwardiia,\*
1958. 317 p. (Mira 12:2)

(Motion-picture projection)

PETRUIS, V.D.; ARTOBOLEVSKIY, I.1., akademik, obshchiy rod.;
PETROVA, E., tekhn.red.; SAMOKHVALOVA, N., tekhn.red.

[Machine; its peak, present, and future] Mashina; ee proshloe, nastoiashchee i Udushchee. Moskva, Izd-vo Tak Vikish "Molodaia gvardiia," 1959. 509 p.

(Machanical engineering)

(Machanical engineering)

28(2) AUTHOR:

Pekelis, V.D

sov/29-59-4-7/26

TITLE:

Is a "Thinking" Machine Capable of Solving Any Problem? (Mozhet li "dumayushchaya" mashina reshit! lyubuyu zadachu?)

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 4, pp 8-9 (USSR)

ABSTRACT:

Referring to the automatic computer suggested by the British mathematician A. T'yuring in 1937, the author tries to demonstrate the possibilities of a "thinking" machine. In general, that machine is qualified to solve automatically any problem. For this purpose the machine only requires a program-table, i.e. an "algorithm". It is true that it can neither operate with fraction numbers nor with negative quantities, but on the other hand the solution of the most intricate problems is virtually reduced to the execution of uniform and most simple operations. The combination of several simple proceedings shows the ways and means for automatizing the spiritual work of man. This machine is apt to solve highly difficult calculatory problems, to translate from one language into another, to play chess, draughts, dominoes, and to find a way out of a labyrinth. It has never been tried to construct the machine of T'yuring because it is very primitive and slow.

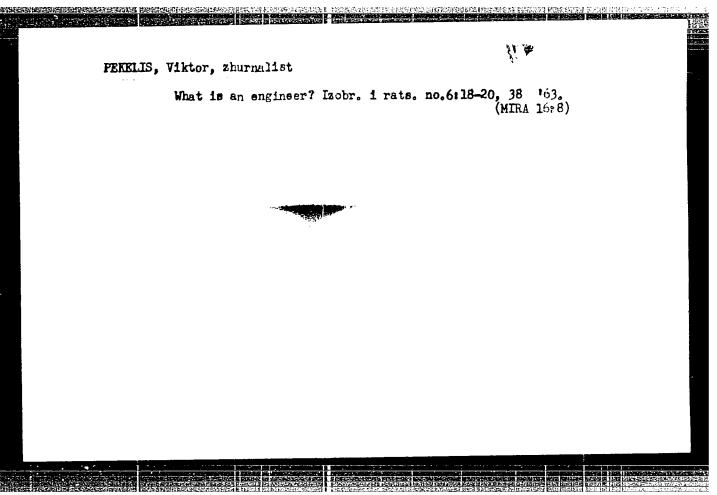
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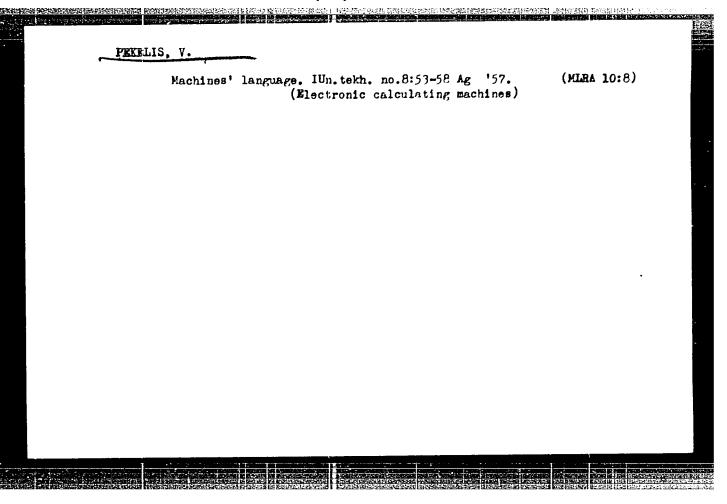
Is a "Thinking" Machine Capable of Solving Any Problem?

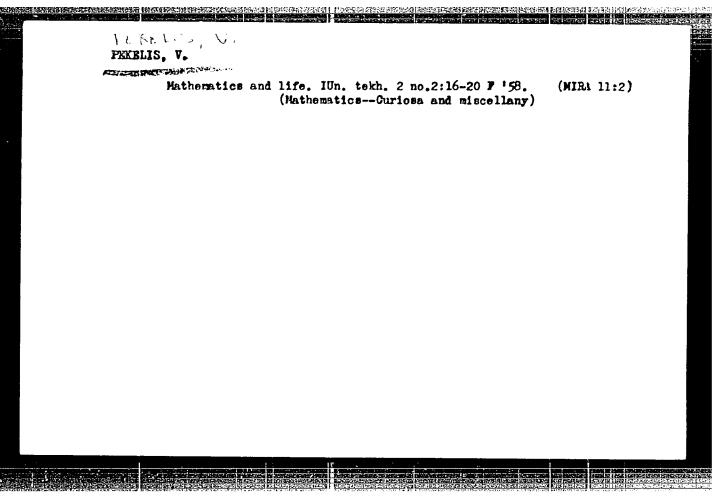
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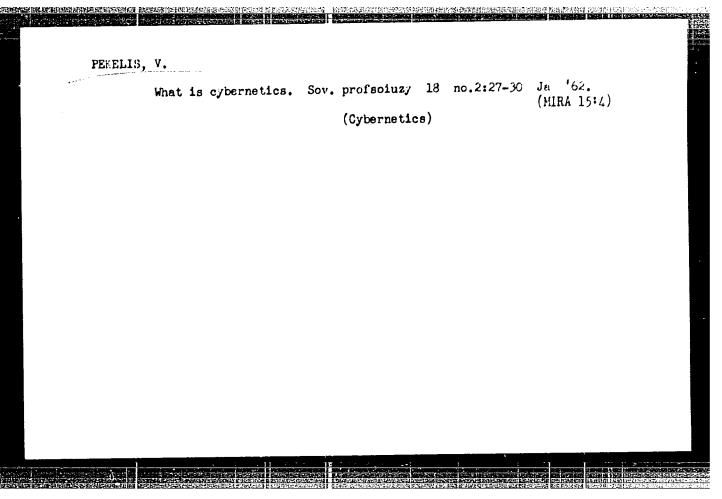
The machine exists only on paper; nevertheless, it is of extraordinarily great theoretical importance, because it demonstrates ad oculos that any process, however complicated in itself, can be subdivided by means of the algorithm into simple and uniform phases. It proves further that problems for which no algorithm can be established, cannot be solved, neither now nor in the future, not even by the most perfect electronic machines. Such problems can only be tackled by the human brain. There are 2 figures.

Card 2/2









PERELIS, VD

28(2)

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PHASE I BOOK EXPLOITATION

SOV/2616

Kobrinskiy, Natan Yefimovich, and Viktor Davydovich Pekelis

Bystreye mysli (Faster Than Thought) [Moscow] Izd-vo TsK VLKSM "Molodaya gvardiya", 1959. 388 p. 90,000 copies printed.

Ed.: V. Fedchenko; Tech. Ed.: A. Kovalev.

PURPOSE: This book is intended for the general reader with some education but without a mathematical background.

COVERAGE: The book contains a discussion of the computer, its fundamental principles, and some of its applications, written in popular style and humorously illustrated. The authors discuss the history of counting and number systems and the development of modern computers from the time of primitive computing devices like the abacus. They also discuss the logic, basic components, and fantastic speeds of present-day computers. Advantages and disadvantages of computers are discussed. No personalities are mentioned. There are no references.

1/5

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AUTHOR:

Pekelis, V.

TITLE:

Master of machines

Tekhnika molodezhi, no. 6, 1961, 10-11

TEXT: The author describes the functions of the biomechanical system or more simply the combined effort of man and machine in performing complicated operations. As computers cannot be used to carry out every operation, it has been necessary to find a way of reducing the time required by man's brain and the number of movements required to control a machine. Tests and experiments have shown that man's movements are not an essential link in the biomechanical control system, since the change in the biocurrents of the muscles carrying out these movements occurs before any such movement is completed. Man can cause the development of biocurrents in his muscles and regulate them without even moving. A signal from the brain alone creates a biocurrent of the required capacity. In 1957, Soviet specialists created a biomanipulator. In the summer of 1960, at the 1st International Congress of the Federation on Automatic Control, a prosthesis-manipulator was demon-

Card 1/3

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Master of machines

strated. This bioelectrical system of control, called the "iron hand" for short, was described in the journal "Tekhnika molodezhi", no. 4, 1958. The author points out, however, that better, more sensitive and more easily controllable manipulators have since been created. These will permit several complicated problems of prosthetics to be resolved, such as the creation of pliable, artificial limbs with various properties of manipulation. They will reproduce the movements of the various fingers and will be very powerful. The bicelectrical system will have only the function of control. On the other hand, these manipulators will be able to distinguish between different degrees of heat, strength etc. The author, in pointing out the advantages of a bioelectric manipulator over a mechanical one, emphasizes the fact that it can be used over long distances. The author cites a case where a locomotive is controlled by a device based on the "iron hand". In this case, one signal is given from the muscles bending the wrist and another - from the muscles which unbend it. In other words, one "forward" and one "reverse" signal. The solution of the problem of the direct use of the biocurrents of the central nervous system depends on the results of research in the field of electroencephalography. When this problem is resolved, the number of

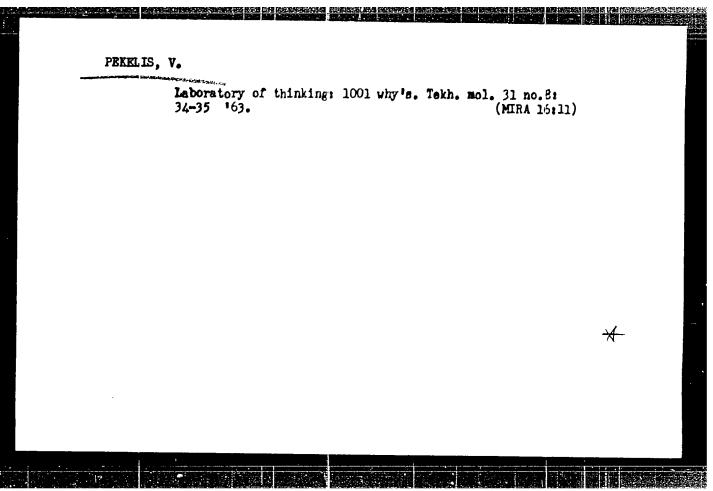
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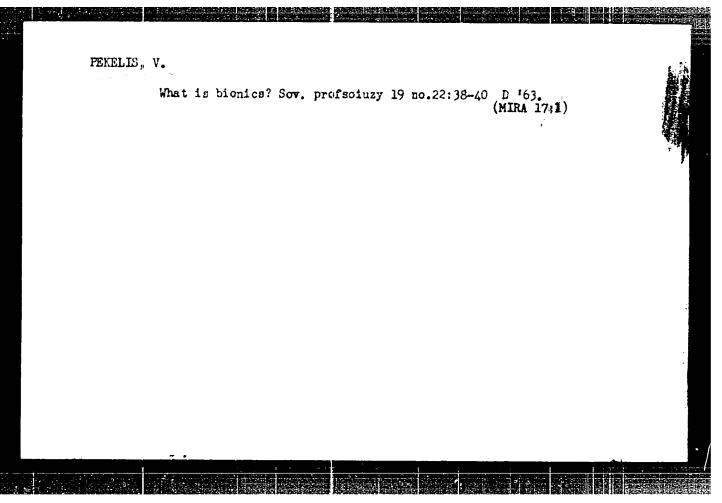
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Master of machines

stages required for an informative command to be transmitted from the man to the machine will be reduced to a minimum. Descriptively speaking, the machine will be controlled by "unexpressed wishes". In conclusion, the author emphasizes the tremendous scope of this new field of science, and the modern trend towards full automation of all labor-consuming processes. References are made to Ye. Polyan, senior engineer of the Institut protezirovaniya i protezostroyeniya (Institute of Prosthetics and the Making of Artificial Limbs), academician I.I. Artobolevskiy, Dector of Technical Sciences A.Ye. Kobrinskiy and academician A.A. Blagonravov.

Card 3/3



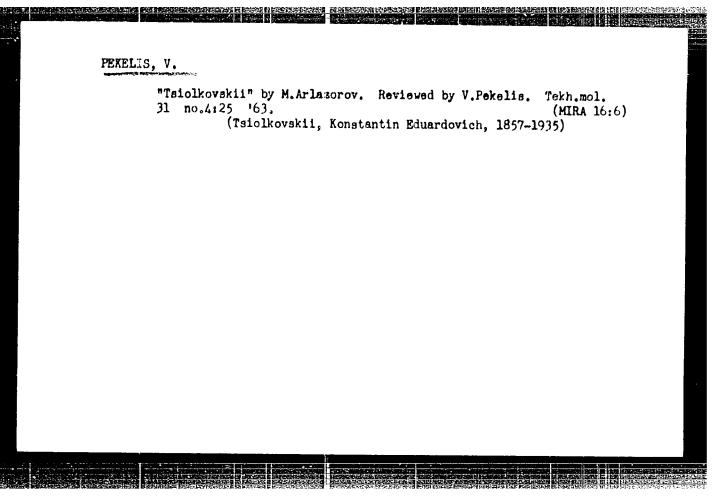


KCBRINSKIY, Natan Yefimovich; PEKELIS, Viktor Davidovich;
LIVARCV, A., red.; YEGOÑOVA, I., tekhn. red.

[Faster than thought] Bystree mysli. Moskve, Molodeia gvardiia, 1963. 469 p.

(Cybernetics)

(MIRA 16:11)



On the road 1-2 '63.	On the road toward the thinking crystal. Tekh. mol. 31 no.3: 1-2 '63. (MIRA 16:6)				
	(Cybernetics)	(Crystals)			

RAPKOV, Vladimir Ippolitovich; FEKELIS, Viktor Davydovich; GOLDOVSKIY, Ye.M., prof., doktor tekhn.nauk, zasluzhennyy deyatel nauki i tekhniki, nauchnyy red.; SKORUBSKAYA, I.N., red.; GOLICHERKOVA, A.A., tekhn.red.

[The A B C's of the amateur motion-picture photographer; how many letters in the A B C's of the amateur motion-picture photographer?] Azbuka kinoliubitelia; skol'ko buky v azbuke kinoliubitelia? Moskva, Izd-vo VTsSPS, Frofizdat, 1961. 346 p.

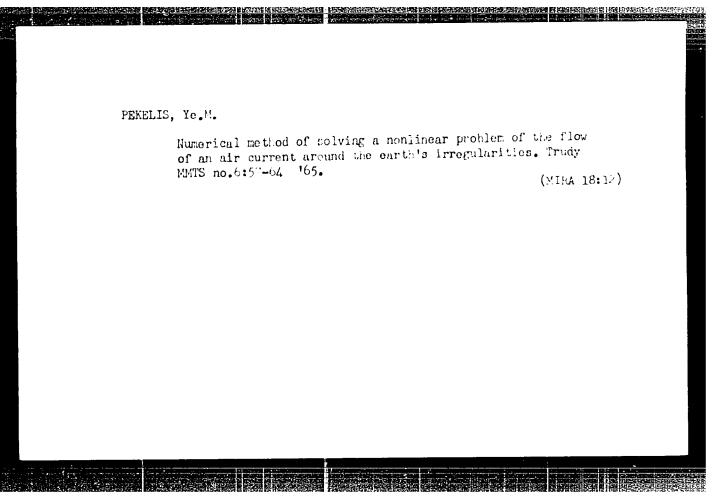
(Amateur motion pictures)

(MIRA 15:2)

ALEKSANDROV, I.N., inzh.; PEKELIS, V.3., inzh.

Automatic voltage regulation in the feed centers of power distribution networks. Elek. sta. 34 no.9:31-34 S '63.

(MIRA 16:10)



"Determination of the Deaf icland of Discrimination of Redign and filted one of Redemen the Helt and Cryst-law? Salcium Minorie," N. J. h. 10, 10 (1000 km), N. J. Holman, Ye. G. Fekel'maya, h. d. a. d. b.d. U.R.

Iz Ak Mauk SSSR, CKhh, 'o.L., 1650-168

The conflict Matritudian file and of the factors for both the matter of another matrix. It is not not to the control of the matrix of another to the file of the factor of Sr and ha, but not on the file of the salcium of the factor of Sr and ha, but not on the file of the file of the factor of Sr and ha, but not on the file of the salcium of the file of the factor of Sr and ha, but not on the file of the salcium of the file of the factor of Sr and ha, but not on the file of the factor of Sr and ha, but not on the file of the factor of the file of the factor of Sr and ha, but not on the file of the factor of the file of the factor of Sr and ha, but not on the file of the factor of the file of the factor of Sr and ha, but not on the file of the factor of Sr and ha, but not on the file of the factor of Sr and ha, but not on the file of the factor of Sr and ha, but not on the file of the factor of Sr and ha, but not on the file of the factor of Sr and has the factor of Sr and Sr

PEKEN 10, Kn., kand.biolog.nauk; BOGDANOVSKIY, A., aterahly neu-heyy sotradnik; TRISHKIN, S., starshly nauslayy sotradnik

Derivatives of triagine and area in potato plantings. Zashoh.rast.:t vred.i bol. 10 nc.4:27-28 '65. (MIRA 18:6)

1. Gomel'skaya oblastnaya sel'skokhonyaystvennaya opythaya stantsiya.

MAXSIMOV, Vasil'iy Mikhaylovich, dotsent, kand.geologo-miner.nauk; ASATUR, K.G., dotsent, kand.tekhn.nauk; DAVIDOVICH, V.I., dotsent, kand. tekhn.nauk; ALBUL, S.P., kand.geologo-miner.nauk; PAUKER, H.G., inzh.-gidrogeolog; OSTROUMOV, B.P., gidrotekhnik; ZAYTSEV, I.K., doktor geologo-miner.nauk; TOLSTIKHIN, N.I., prof., doktor geologomineral.nauk; REZNIKOV, A.A., kand.khim.nauk, starshiy nauchnyy sotrudnik; MERSHALOV, A.F., assistent; VOROTYNTSEV, V.T., dotsent, kand.tekhn.nauk; MARKOV, I.A., dotsent, kand.geologo-miner.nauk; KERKIS, Ye.Ye., dotsent, kend.geologo-miner.nauk; KHITROV, I.N., inzh.-geolog: BOROVITSKIY, V.P., kend.geologo-miner.nauk; RAVDONIKAS, 0.V., kand.geologo-miner.nauk; ONIN, N.M., kand.geologo-miner.nauk; BASKOV, Ye.A., inzh.-gidrogeolog: NOVOZHILOV, V.N., dotsent, kand. geologo-miner.nauk; PEKEL'NYY, I.S., insh.-gidrogeolog; NEVKL'SHTEYN, Yu.G., insh.-gidrogeolog; BOSKIS, S.G., insh.-gidrotekhnik; NIKIFOROV, Ye.M., inzh.-gidrogeolog; GATAL'SKIY, M.A., prof., doktor geologominer nauk, nauchnyy red.; DOLMATOV. P. 5 ... reduchchiy red.; GEN-NAD'YEVA, I.M., tekhn.red.

[Hydrologist's handbook] Spravochnoe rukovodstvo gidrogeologa.
Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry,
Leningr.otd-nie, 1959. 836 p. (MIRA 12:4)

1. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut (for Reznikov).

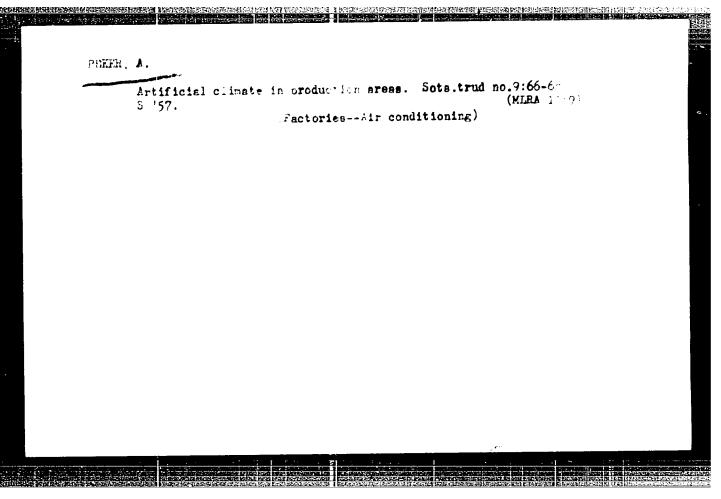
(Hydrology)

PEKEN'O, P.Eh., aspirant

Reflect of fertilizers on the anatomical structure of stalks and the resistance of spring wheat to lodging. Isv.TSKbA no.2:209-216 (MIRA 12:8)

(Wheat--Fertilizers and mamures)

PEKEN'O, P. Kh., Cand Biol Sci -- (diss) "Effect of mineral fertilizers on the hervest yield and quality of grain, anatomy and chemical composition of wheat stems in relation to planting seed for a winter dormant period." Moscow, 1960. 20 pp; (Moscow Order of Lenin Agricultural Academy im K. A. Timiryazev); 200 copies; price not given; (KL, 19-60, 132)



VLapinhash 1.1.; calindateh, L.S., FERBR, Eb.S.; RCGCVIN, T.A.

Synthesis of Ento prosperiontalining cellulose esters. Vysokom. soad.
7 no.5:78c-79c My 165.

1. Moskovskiy tekstulinyy institut.

PEKER, L. K.

"Concerning the Expected Special Properties of Decay of Six Quasi-Particle Isomeric States in Odd-Odd Nuclei with A 240."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbiliol, 14-22
Feb 64.

LGU (Leningrad State Univ)

PEKER, L. K.

USSR/Nuclear Physics - Excitation Jul/Aug 53

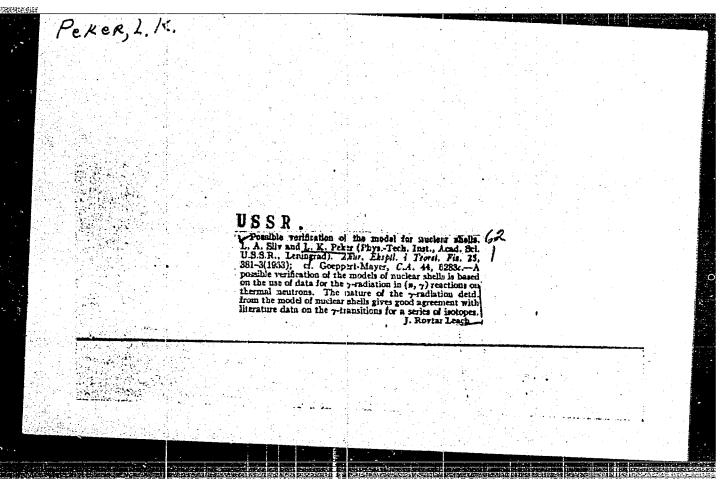
"Two Systems of Nuclear Excited Levels," L. K. Peker and L. A. Sliv, Phys Tech Inst, Acad Sci

Iz Ak Nauk, Ser Fiz, Vol 17, No 4, pp 411-427

Acknowledge good results from analyzing M. G. Mayer's (Phys Rev 78, 16 (1950)) order of energy levels. The shell model allowed one to establish the existence of two systems of excited states: the "sequence" and the "hole" levels. It was concluded from analysis of experimental

272**T4**4

material that in nuclei of atomic number  $20 \leqslant Z \leqslant 70$  the mean distance between levels is 200 keV and the energy width of one shell approximates 1000 keV. Fifty-four references, mostly foreign. Received 23 Jun 53.



ACCESSION NR: AP4024056

8/0048/64/028/002/0302/0307

AUTHOR: Poker, L.K.

TITLE: Regarding three-particle isomeric states of odd-A nuclei Report, Four-teenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14-22 Feb 1964

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 302-307

TOPIC TAGS: odd-A nucleus, even-even nucleus, three-particle state, three-particle state, isomeric state, two-particle state, many-particle state, high spin

ABSTRACT: A number of odd-A nuclei are now known to have long-lived isomeric states which cannot be described as single-particle states. The Z and N values of such isomers do not fall on the usual "islands of isomerism" and these isomers are characterized by unusually high spins and excitation energies. Among such isomers are Mo93, T = 6.7 h, Iiso =  $21/2^+$ ,  $E_{180} = 2428$ ;  $C_8135$ , T = 53 min, Iiso =  $19/2^-$  (or  $17/2^-$ ),  $E_{180} = 1620$ ;  $E_{11}$ ,  $E_{180} = 19/2^-$ ,  $E_{$ 

Card 1/3

ACCESSION NR: AP4024056

even-even core of the nucleus. For this reason the effect has come to be called core isomerism. In view of their long lifetimes, these states cannot be collective ones. The large values of the spin indicate that several unpaired nucleons contribute to the total angular momentum, while the values of the excitation energy (particularly for the last four isomers listed above) limit this number to three nucleons. Hence it may be inferred that these isomeric states are three-quasiparticle states. The purpose of the present note is to call attention to the fact that there is a relationship between such states and two-particle states in neighboring eveneven nuclei. This allows of drawing certain inferences regarding the configurations of the three-particle isomeric states, predicting other as yet unknown three-particle isomers, as well as yet unknown two-particle levels in even-even nuclei. To elucidate this relation there are compared the data on the three-particle states of Mo93, Cs135 and Lu177 with the data on the known two-particle states in the neighboring even-even nuclei with the same even number of protons or neutrons, namely, Mo<sup>92</sup>, Ba<sup>136</sup> and Hf<sup>178</sup>. The analogies and regularities involved are discussed at some length. It is predicted that analogous long-lived isomeric states may exist in Sb<sup>131</sup>, 1<sup>133</sup>, La<sup>137</sup>, Pr<sup>139</sup> and Pa<sup>141</sup>, with probable spins of 19/2, 17/2 or 15/2. It is also possible that long-lived three-particle states may exist in Zr<sup>91</sup>, po<sup>209</sup> and Bi<sup>211</sup>. The author is sincerely grateful to B.S.Dzhelepov, L.A.Sliv, A.P.

Cord 2/3

ACCESSION NR: AP4024056

Klyucharev, and V.V. Remayev for useful discussions." Orig.art.has: 1 formula, 1 figure and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta (Scientific Research Physical Institute, Leningrad State University)

SUBMITTED: 20Sep63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: NS

NR REF SOV: 006

OTHER: 010

Cord 3/3

PEKER, L. K.

USSR/Buclear Physics - Transitions

11 Sep 53

"Two-Nucleon Nuclear Transitions," L. A. Sliv and L. K. Peker, Leningrad Phys-Tech Inst, Acad Sci USSR

DAN SSSR, Vol 92, No 2, pp 277-279

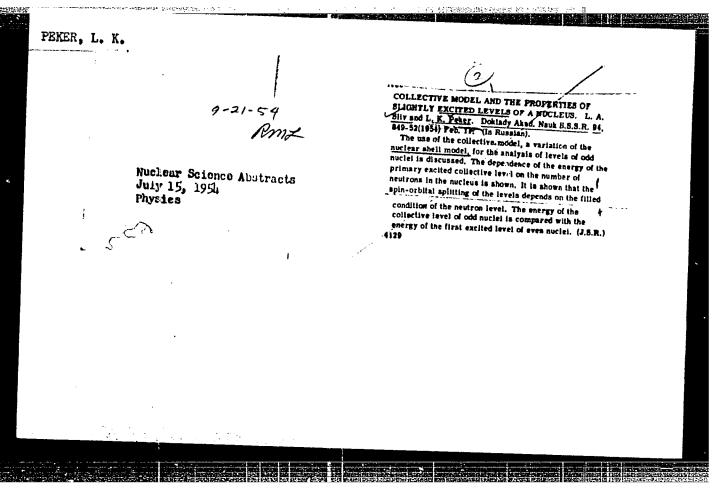
Continuation of former work by authors (DAN 88, 5 (1953)) in which existence of two systems of nuclear levels, either "successive" or "hole", was pointed out. Analyze case in which the nucleus has a mixed system consisting of both "successive" and "hole" systems. Recently published works on decay schemes of certain nuclei (H. Zeldes et al., Phys Rev

269188

79 (1950) etc) facilitate the study of formation of mixed systems of levels. Presented by Acad P. I. Lukirskiy 4 Jul 53.

# "APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001239820019-6



USSR/Physics

Card 1/1 Pub. 22 - 16/56

Asthors & Sliv, L.A., and Peker, L.K.

Title 1 The C - decomposition and a model of shells.

Periodical : Dok. AN SSSR 99/5, 727-730, Nec. 11, 1954

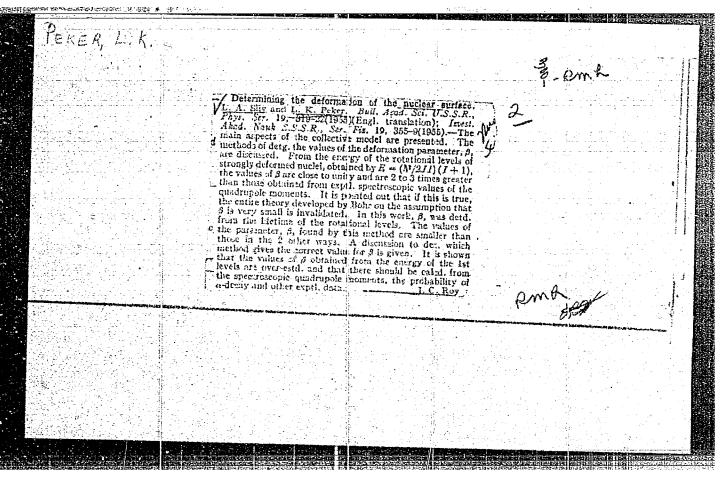
A relationship between the probability of Q - particle decomposition and the completeness state of a nuclear shell is established. The question is considered in the light of time (T) for Q - particle decomposition and the completeness state of a nuclear shell. It was found that the agreement between the theoretical probability, w, of an Q - particle decomposition and

the experimental data exist only for those cases when the neutron and proton shells are far away from their states of completeness. This fact establishes a certain dependence of the probability w of O - decomposition and the time T of its duration and a time needed for completing the shell.

Seven references (1948-1953) Graphs.

Institute: The Leningrad Physico-Technical Institute of the Acad. of Scs. of the USSR

Presented by: Academician P.A. Lukirskiy, July 28, 1954.



SLIV, L.A.; PEKER, L.K.

On detruining nuclear surface distortion. Isv.AB SSSR.Ser.fiz.
19 no.3:355-359 My-Je '55. (MIRA 9:1)

1.Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR.

(Moscow--Spectrus analysis--Congresses)

USSR/Nuclear Physics - Thermal neutron capture

FD-3259

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Card 1/1

Pub. 146 - 18/44

Author

: Peker, L. K.

Title

: Radiation capture of thermal neutrons without formation of com-

pound nucleus

Periodical

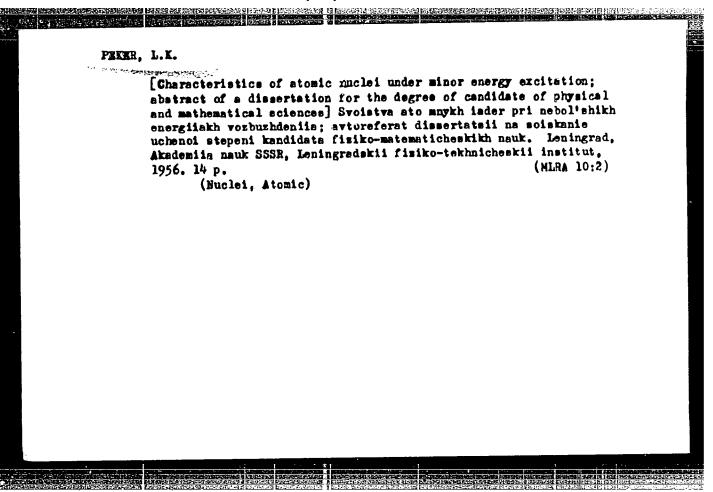
: Zhur. eksp. i teor. fiz., 29, No 6(12), Dec 1955, 865-866

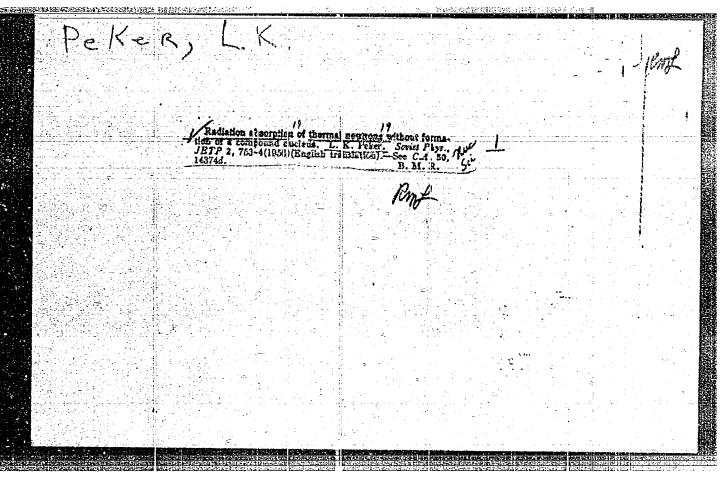
Abstract

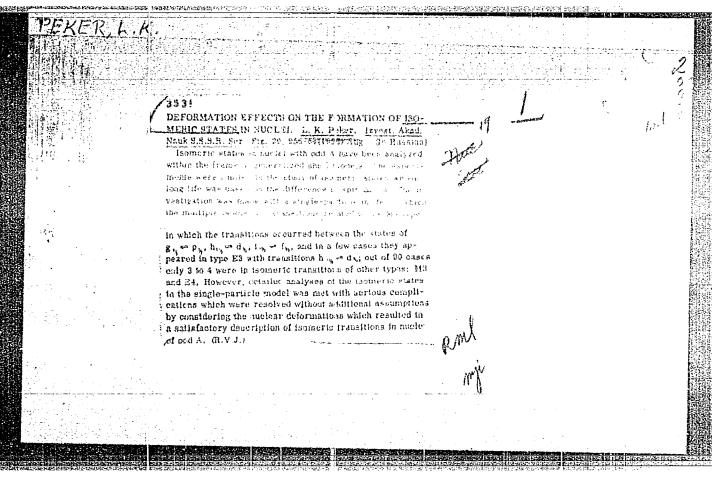
: The author calls attention to the fact that even such a reaction as the radiation capture of thermal neutrons can apparently proceed without the formation of a compound nucleus. He considers the reaction Pb206(n,gamma)Pb207, and the scheme of levels of 82Pb207 in this connection. Fifteen references, all Western except two.

Institution

Submitted : July 25, 1955







Category: USSR/Nuclear Physics - Structure and Properties of Nuclei

C-4

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 459

Author : Peker, L.K.

Inst : USSR Academy of Sciences

Title : On Isomer States in Deformed Nuclei

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 3, 616-617

Abstract : It is shown that taking the deformation of the nucleus into account

makes it possible to eliminate many difficulties, occurring when experimental data on the isomer states of nuclei are checked against the shell model representation. The analysis is based on a level scheme, obtained by Nielson (Referat. Zhurnal Fizika, 1956, 22068) when taking into account the deformations in an oscillator model of the nucleus. It is noted that this scheme leads to the presence of isomer states in the following nuclei:

179 183 185 (E3). 72Hfio7(E3, M3), 74Wio9 (E3, M3), 74Wiii. (E3, M3),

177 171

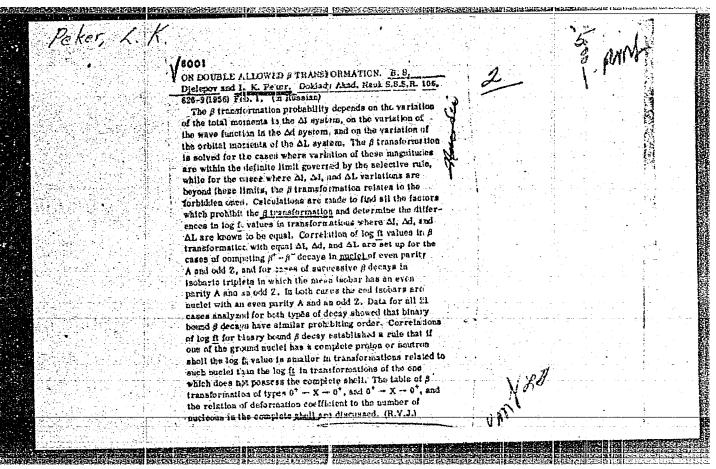
7608115(M3 + E4) and also 68 Er 99 , 72Hf 105, 70 101. Experimental data lmown at the present time confirm this deduction for the first five nuclei (the parentheses contain the multiplicity of the transition). It is emphasized that the isomer states in the deformed nuclei (in which only the

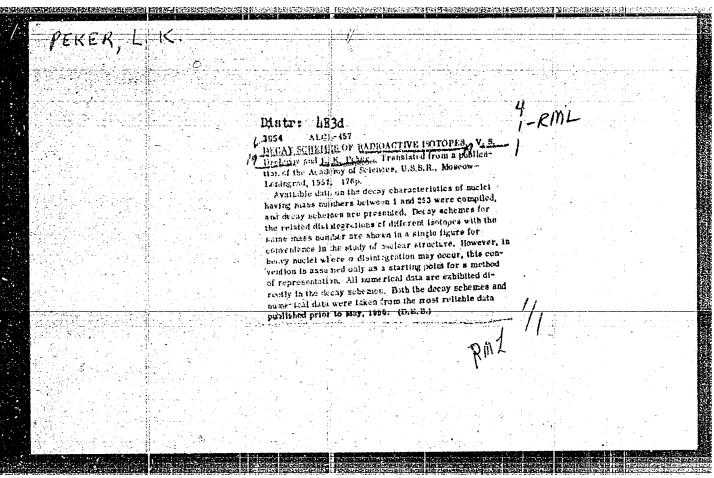
CaPd . : 1/2

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SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1246
AUTHOR GOL'DIN, L.L., PEKER, L.K., NOVIKOVA, G.I.
TITLE The Alpha Decay
PERIODICAL Usp. fis. nauk, 59, 459-541 (1956)
Publ. 7 / 1956 reviewed 9 / 1956
Publ. 7 / 1956 reviewed 9 / 1956

This survey is arranged as follows: Experimental technics,  $\alpha$  -  $\gamma$  - correlations (quite recently a-rays are examined by the determination of the angular correlations between  $\delta$ -particles and  $\gamma$ -rays); the classical theory of  $\alpha$ -decay;  $\alpha$ -decay on the ground level of the daughter nucleus (the individual properties of nuclei depend more on the number of protons than on the number of neutrons, apparently because in heavy nuclei there are far more neutrons than protons. On the occasion of  $\alpha$ -decay the properties of the mother nucleus and not of the daughter nucleus probably play the essential part); the deviation of nuclei from the spherical shape and the rotation structure of the excited levels; the rotation levels and the fine structure of  $\alpha$ -rays; the intensity of the lines in a-spectra, simplified and not simplified transitions; the intensity of  $\alpha$ -transitions on rotation levels. Summary: The present theory of  $\alpha$ -decay is not satisfactory. Essentially, nothing has been done except computing the transparence of barriers for a spherical nucleus. This is, however, quite insufficient because the  $\alpha$ -active nuclei are by no means spherical. Nothing whatever is as yet known about the probability of the creation of a-particles. Undeniable progress was made by the discovery that a considerable part of the lower excited levels has rotational character. Nevertheless, many points still remain unexplained (par-





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(1992) : 유럽인 (1992) [18]				
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Peker L.K.

48-7-16/21

AUTHORS:

Peker, L.K., Gustova, L.V., Chubinskiy, O.V.

TITLE:

The Rotation Levels of  $Mg^{24}$  (Rotatsionnyye urovni  $Mg^{24}$ )

PERIODICAL:

Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7, pp. 1013 - 1016 (USSR)

ABSTRACT:

It was the aim of the authors to check the conclusion of the generalized model according to which the conditions leading to the ellipsoidal equilibrium form of the nucleus are not only realized in the domain of the heavy nuclei (150  $\leq$  A  $\leq$  190 and A > 222), but also in the domain of the light nuclei, especially near A = 24. It is the purpose of this paper to clear up the type of the higher excited levels of the nucleus of  ${\rm Mg}^{24}$ (E > 4,12 MeV). Figure 1 and the table show the experimental values on the state of the nucleus of Mg<sup>24</sup> up to the exciter energy of 9 MeV. The data on the excited states of Mg24 were obtained as a result of the investigation of the  $\beta$ -decay of two isobaric nuclei and various nuclear reactions. A detailed report is given on the level  $\sim$  8,4 MeV, where various assumptions are made. Figure 2 shows and explains the scheme of the nuclear level of Mg<sup>24</sup>. The interpretation of the high excited

Card 1/2

The Rotation Levels of  ${\rm Mg}^{24}$ 

48-7-16/21

levels of  ${\rm Mg}^{24}$  as rotating levels agrees with the conclusion of the model according to which the nucleus of  ${\rm Mg}^{24}$  possesses an axial-symmetric form of equilibrium. There are 1 table, 2 figures and 21 references, 2 of which are Slavic.

AVAILABLE:

Library of Congress

Card 2/2

48-7-19/21

AUTHOR:

Peker, L.K.

TITLE:

On the Peculiarities of the Transitions of an Equilibrium Nuclear

Form (Ob osobennostyakh skachkov ravnovesnoy formy yader)

PERIODICAL:

Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7,

pp. 1025 - 1028 (USSR)

ABSTRACT:

Nuclei with A = 150 - 190 have an ellipsoidal form of equilibrium which depends on the number of neutrons and protons in the nucleus. It was found that the transformation of the equilibrium form from a spherical into an ellipsoidal one takes place on the transition of nuclei with a neutron number of N = 88 into nuclei with N = 90 which may easily be noticed since it is accompanied by a considerable modification of the energy of the first collective level and by other processes (figure 1). Such an abrupt alteration of the nuclear properties was never observed in nuclei with other neutron numbers. It was the object of this paper to clear up the part played by protons and neutrons individually in the process of the transformation of the form of equilibrium and to determine the values N and Z at which this transformation takes place. In order to determine the boundaries of the domain of the

Card 1/3

On the Peculiarities of the Transitions of an Equilirbium Nuclear Form

deformed nuclei, account has to be taken of the fact that the character of the excited levels which is further described is to be considered as the fundamental characteristic of this or that form of equilibrium. Therefore it shall further be judged on the form of equilibrium of a nucleus exclusively according to the properties of the natural and the excited states. Figure 2 shows the nuclear potential as dependent on the parameter of the deformation  $~\beta \approx ~\Delta$  R/R. The author further describes in detail the determination of the influence of protons and then turns to the nuclei with A  $\approx$  190 in which an inverse process, i.e. from the ellipsoidal to the spherical form, takes place and he explains this process (figure 3). He comes to the result that no definite conclusion on the boundaries of the domain of deformed nuclei may be drawn. It may only be assumed that the transformation of the form of equilibrium apparently takes place when Z = 76 - 78 and N = 114 - 116. In order to determine the boundary values Z and N more accurately, he uses nuclei with uneven A-values which are represented by figure 4. There are 5 figures and 7 references, 2 of which are Slavic.

Card 2/3

48-7-19/21

On the Peculiarities of the Transition of a Equilibrium Nuclear Form

ASSOCIATION: Library im. M. For kiy, AN USSR

(Billioteka Akademii nauk SSSR im. M. Gor'kogo)

AVAILABLE: Library of Congress

Card 3/3

#### "APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001239820019-6 **建筑的区域的通过的线线的线线的显示性,1888年中,1888年中,1888年** 1888年 1

PEKER, L.K.

PA - 2873

AUTHOR:

Not given

TITLE:

Dissertations (July-December 1956). Department for Physical-Mathematical Science. (Zashtchite dissertazii. Otdeleniie fisiko-

matematicheskikh nauk, Russian)

PERIODICAL:

Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 4, pp 132-132

(U.S.S.R.)

Received: 5 / 1957

Reviewed: 7 / 1957

ABSTRACT:

The following dissertations were submitted at the Institute for Crystallography for the purpose of obtaining the Academic degree

of "Candidate of Physical and Mathematical Sciences:

E.D.DUKOVA: "Experimental Research of the Stratified Spiral Growth

of Crystals of the Gaseous Phase".

At the Physical-Technical Institute:

S.M.RIVKIN: "Investigation of the Behavior of Unbalances Current Carriers (Experimental Investigation of the Process of Motion, Generation, Recombination of Non-Balanced Current Carriers)"

E.I.AGISHEV: "Non-Magnetic Momentum-Mass-Analyzers".

over

V.G.BOICHEV: "The Investigation of the Thermoelectronic and Repeated Electron Emission in the Solid and Liquid State of Brass, Silver,

and Germanium as well as in Tin."

Card 1/2

AUTHOR

PEKER, L.K., SLIV, L.A.,

PA - 2993

Electric Konopole Transitions for Muclei with odd Atemic Weight.

(Elektricheskiye menepel'nyye perekhedy u yader s nechetnym atemnym

vesem - Russian)

PERIODICAL

Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 3,

pp 621-622, (U.S.S.R.)

Received 6/1957

Reviewed 7/1957

ABSTRACT

At first the stage of the problem is discussed on the basis of some pre--vious works. The present paper is intended to point out the fact of the existence of k0 transitions between the levels with spin  $1/2(1/2_{\pm} \rightarrow 1/2_{\pm})$ in the case of nuclei with odd A. In the case given the spin selection rules exclude the possibility of E2 transitions ( = 0), and the formula  $T_{e0}/T_{\gamma} = \alpha_k - \beta_l$ , then applies. Here  $\alpha_k$  denotes the coefficient of the interior conversion on the K-shell,  $\beta_1$  - the theoretical coefficient of the interior conversion of ML - radiation,  $T_{\gamma}$  - the probability of the  $\gamma$ radiation,  $T_{\rm eo}/T_{\rm c}$  - the part played by electrons which are connected with a monopole transition. Just by means of the last-mentioned formula the experimental method is simplified essentially, for in this case measuring of ck alone sufficies. The most accurate investigation was that of the level scheme of Aul97. (A corresponding scetch is attained). The latest measurements of the coefficients of the interior conversion for the transition 191keV furnished the value of = 2,5. In the case of pure Mi-transition, ok = 1, would apply, and in the case of the presence of an E2-admixture the coefficient of the interior conversion would be still

Card 1/2

PEKEK, L.K. PEKER, L.K. A New Isomerism in Eu<sup>152</sup> 56-7-55/66 AUTHOR TITLE (O n ovom wide izomerii w Eu<sup>152</sup>) Zhurnel Eksperim. i Teoret. Fiziki 1957, Vol 33, Er 7 PERIODICAL pp 291-293 (USSR) The investigation of the entire material of the decay ABSTRACT of the isomeres  $E_{u}^{152m}$  (9,2 h) and  $E_{u}^{152}$  (13 a) leads to the conclusion that Eu 152 is the rare and perhaps the only case in which a nucleus is in a intermediate state. This intermediate state is between the spherical and the ellipsoidal form of equilibrium of the nuclei and must have special properties, such as the lack of a /-transition between the two isomeres, which according to the spin difference of 2, would have to be an  $E_9$ -transition. It is therefore of great importance to set up the decay scheme of both nuclei more extensively and with greater accuracy in order to learn more about the structure of CARD 1/2

GUSEV, Nikolay Grigor'yevich; MASHKOVICH, Jadim Pavlovich; OBVINTSEV, Gennadiy Vasil'yevich; MARGULIS, U.Ya., red.; PSKNR, L.K., nauchnyy red.; AKHLANOV, S.H., tekhn.red.

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[Garma radiation from radioactive isotopes and fission products; theory and tables] Garma-izluchenie radioaktivnykh isotopov i produktov deleniia; teoriia i tablitsy. Hoskva, Gos. izd-vo fiziko-matematicheskoi lit-ry, 1958. 208 p. (MIRA 12:1) (Garma rays) (Radioisotopes)

21(7)

PHASE I BOOK EXPLOITATION

BOV/1101

**在時代已经的政治的所有法律的表現的原理的理解的知识的知识的知识的知识的证明的证明**是是是

Dzhelepov, Boris Sergeyevich, and Leon Kaufmanovich Peker

Skhemy raspada radioaktivnykh ynder (Decay Schemes of Radioactive Nuclei) Moscow, Izd-vo AN 688R, 1958, 780 p. 6,000 copies printed.

Sponsoring Agency: Akademiya namk SSSR. Radiyevyy institut.

Resp. Ed.: Yu. V. Khol'nov; Tech. Ed.: R. S. Pevzner.

FURPUSE: This book is for muclear physicists and specialists in radio chemistry who are concerned with the nature and mechanism of radioactive decay, isotope formation, or muclear radiation.

COVERAGE: The present publication incorporates all information available on decay schemes to the end of 1957. The 256 decay schemes include those of many odd-odd isotopes in the domain of deformed nuclei with Am150 — 190 and A) 222 which were rechecked and constructed or essentially changed to correspond with modern conceptions of the unified shell model about the nature of rotational and vibrational levels. If a nucleus has several low levels which are excited only by nuclear reactions but not by processes of radioactive decay, only those levels

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· PEKER, J.K 48 22 1 2/17 Grigor'yev, Ye P., Dzhelepov, B. S. Zolotavin, A. V., Kraft, O. Ye., Krataik, B., Peker, L. K. AUTHORS: The Decay of Tb 160 and H 160 and the Level Scheme of Dy (Raspad Tb 160 i Ho 160 i skhema urovney Dy 60) TITLE: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya - ora PERIODICAL: Vol. 22, Nr 2, pp 101-125 (USSR) Radioactive Tb 160 was here obtained by irradiation with slow neutrons of chemically pure (99 99%) Tb30: The APSTRACT: position and relative intensity of 19 lines was carefully measured in the conversion spectrum. The decomposition of the known line 963 + 966 keV into two components essentially new. The relative intensities of the -transitions were obtained by means of a division of the line areas through the corresponding theteelectri absorption factor. The values were because of the absorption of the Yarays corrected in the scar - itself and at the walls of the cylinder, as well as because of the absorption of the photoelectrons in the target and in the slits of the counter. The obtained relative intensities Card 1/3